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RAW SEQUENCE LISTING

DATE: 06/28/2002

PATENT APPLICATION: US/10/081,864

TIME: 10:33:12

Input Set : D:\seqlist.txt

Output Set: N:\CRF3\06282002\J081864.raw

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4 <110> APPLICANT: Lukyanov, Sergey
5     Lukyanov, Konstantin
6     Yanushevich, Yuriy
7     Savistky, Alexandr
8     Fradkov, Arcady
10 <120> TITLE OF INVENTION: Non Aggregating Fluorescent Proteins and
11     Methods for Using the Same
14 <130> FILE REFERENCE: CLON-067
16 <140> CURRENT APPLICATION NUMBER: 10/081,864
C--> 17 <141> CURRENT FILING DATE: 2002-06-19
19 <150> PRIOR APPLICATION NUMBER: 10/006,922
20 <151> PRIOR FILING DATE: 2001-12-04
22 <150> PRIOR APPLICATION NUMBER: 60/270,983
23 <151> PRIOR FILING DATE: 2001-02-21
25 <160> NUMBER OF SEQ ID NOS: 30
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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31 <212> TYPE: DNA
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37 acgcagacct cgacttttaa agtcaccatg gccaacggtg ggccccttgc attctcctt 180
38 gacatactat ctacatgtgt caagtatgga aatcgatgct ttactgcgta tcctaccagt 240
39 atgcccgaact atttcaaaca agcattttcct gacggaatgt catatgaaag gacttttacc 300
40 tatgaagatg gaggagttgc tacagccagt tgggaaataa gccttaaagg caactgcttt 360
41 gagcaciaat ccacgtttca tggagtgaac ttctctgctg atggacctgt gatggcgaag 420
42 atgacaactg gttgggaccc atcttttgag aaaatgactg tctgcgatgg aatattgaag 480
43 ggtgatgtca ccgcgttcct catgctgcaa ggaggtggca attacagatg ccaattccac 540
44 acttcttaca agacaaaaaa accggtgacg atgccaccaa accatgcggt ggaacatcgc 600
45 attgcgagga ccgaccttga caaagggtggc aacagtgttc agctgacgga gcacgctgtt 660
46 gcacatataa cctctgttgt ccctttc                                     687
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49 <211> LENGTH: 229
50 <212> TYPE: PRT
51 <213> ORGANISM: Anemonia majano
53 <400> SEQUENCE: 2
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56 His Met Asp Gly Cys Val Asn Gly His Tyr Phe Thr Val Lys Gly Glu
57 20                      25                      30
58 Gly Asn Gly Lys Pro Tyr Glu Gly Thr Gln Thr Ser Thr Phe Lys Val

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59          35          40          45
60 Thr Met Ala Asn Gly Gly Pro Leu Ala Phe Ser Phe Asp Ile Leu Ser
61          50          55          60
62 Thr Val Phe Lys Tyr Gly Asn Arg Cys Phe Thr Ala Tyr Pro Thr Ser
63 65          70          75          80
64 Met Pro Asp Tyr Phe Lys Gln Ala Phe Pro Asp Gly Met Ser Tyr Glu
65          85          90          95
66 Arg Thr Phe Thr Tyr Glu Asp Gly Gly Val Ala Thr Ala Ser Trp Glu
67          100          105          110
68 Ile Ser Leu Lys Gly Asn Cys Phe Glu His Lys Ser Thr Phe His Gly
69          115          120          125
70 Val Asn Phe Pro Ala Asp Gly Pro Val Met Ala Lys Met Thr Thr Gly
71          130          135          140
72 Trp Asp Pro Ser Phe Glu Lys Met Thr Val Cys Asp Gly Ile Leu Lys
73 145          150          155          160
74 Gly Asp Val Thr Ala Phe Leu Met Leu Gln Gly Gly Gly Asn Tyr Arg
75          165          170          175
76 Cys Gln Phe His Thr Ser Tyr Lys Thr Lys Lys Pro Val Thr Met Pro
77          180          185          190
78 Pro Asn His Ala Val Glu His Arg Ile Ala Arg Thr Asp Leu Asp Lys
79          195          200          205
80 Gly Gly Asn Ser Val Gln Leu Thr Glu His Ala Val Ala His Ile Thr
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82 Ser Val Val Pro Phe
83 225
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93 tgcgtcgatg gacataaatt tgtgatcacg ggagagggca ttggatatcc gttcaaaggg 120
94 aaacaggcta ttaatctgtg tgtggtcgaa ggtggaccat tgccatttgc cgaagacata 180
95 ttgtcagctg cctttatgta cggaaacagg gttttcactg aatatcctca agacatagct 240
96 gactatttca agaactcgtg tctgtctggt tatacatggg acaggtcttt tctctttgag 300
97 gatggagcag tttgcatatg taatgcagat ataacagtga gtgttgaaga aaactgcatg 360
98 tatcatgagt ccaaatttta tggagtgaat ttctctgctg atggacctgt gatgaaaaag 420
99 atgacagata actgggagcc atctctgcgag aagatcatac cagtacctaa gcaggggata 480
100 ttgaaagggg atgtctccat gtacctcctt ctgaaggatg gtgggcgttt acggtgccaa 540
101 ttcgacacag ttacaaaagc aaagtctgtg ccaagaaaga tgccggactg gcacttcac 600
102 cagcataagc tcacccgtga agaccgcagc gatgctaaga atcagaaatg gcatctgaca 660
103 gaacatgcta ttgcatccgg atctgcattg ccc 693
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106 <211> LENGTH: 231
107 <212> TYPE: PRT
108 <213> ORGANISM: Zoanthus sp.
110 <400> SEQUENCE: 4
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113 Arg Met Glu Gly Cys Val Asp Gly His Lys Phe Val Ile Thr Gly Glu
114           20           25           30
115 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Ala Ile Asn Leu Cys Val
116           35           40           45
117 Val Glu Gly Gly Pro Leu Pro Phe Ala Glu Asp Ile Leu Ser Ala Ala
118           50           55           60
119 Phe Asn Tyr Gly Asn Arg Val Phe Thr Glu Tyr Pro Gln Asp Ile Ala
120 65           70           75           80
121 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Asp Arg Ser
122           85           90           95
123 Phe Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Ala Asp Ile Thr
124           100          105          110
125 Val Ser Val Glu Glu Asn Cys Met Tyr His Glu Ser Lys Phe Tyr Gly
126           115          120          125
127 Val Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Asp Asn
128 130          135          140
129 Trp Glu Pro Ser Cys Glu Lys Ile Ile Pro Val Pro Lys Gln Gly Ile
130 145          150          155          160
131 Leu Lys Gly Asp Val Ser Met Tyr Leu Leu Leu Lys Asp Gly Gly Arg
132           165          170          175
133 Leu Arg Cys Gln Phe Asp Thr Val Tyr Lys Ala Lys Ser Val Pro Arg
134           180          185          190
135 Lys Met Pro Asp Trp His Phe Ile Gln His Lys Leu Thr Arg Glu Asp
136           195          200          205
137 Arg Ser Asp Ala Lys Asn Gln Lys Trp His Leu Thr Glu His Ala Ile
138 210          215          220
139 Ala Ser Gly Ser Ala Leu Pro
140 225          230
143 <210> SEQ ID NO: 5
144 <211> LENGTH: 865
145 <212> TYPE: DNA
146 <213> ORGANISM: Zoanthus sp.
148 <400> SEQUENCE: 5
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150 catggctcat tcaaagcacg gtctaaaaga agaaatgaca atgaaatacc acatggaagg 120
151 gtgcgtcaac ggacataaat ttgtgatcac gggcgaaggc attggatata cgttcaaagg 180
152 gaaacagact attaattctgt gtgtgatcga agggggacca ttgccatttt ccgaagacat 240
153 attgtcagct ggctttaagt acggagacag gatttttact gaatatactc aagacatagt 300
154 agactatttc aagaactcgt gtctgtctgg atatacatgg ggcaggtctt ttctctttga 360
155 ggatggagca gtctgcatat gcaatgtaga tataacagtg agtgtcaaag aaaactgcat 420
156 ttatcataag agcatattta atggaatgaa ttttcctgct gatggacctg tgatgaaaaa 480
157 gatgacaact aactgggaag catcctgcga gaagatcatg ccagtaccta agcaggggat 540
158 actgaaaggg gatgtctcca tgtacctcct tctgaaggat ggtgggcggt accggtgcc 600
159 gttcgacaca gtttaciaag caaagtctgt gccaaagta atgccggagt ggcacttcat 660
160 ccagcataag ctctccgtg aagaccgcag cgatgctaag aatcagaagt ggcagctgac 720
161 agagcatgct attgcattcc cttctgcctt ggcctgataa gaatgtagtt ccaacatttt 780
162 aatgcatgtg cttgtcaatt attctgataa aaatgtagtt gagttgaaaa cagacaagta 840
163 caaataaagc acatgtaaat cgtct
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RAW SEQUENCE LISTING

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Output Set: N:\CRF3\06282002\J081864.raw

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167 <212> TYPE: PRT
168 <213> ORGANISM: Zoanthus sp.
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172 1 5 10 15
173 His Met Glu Gly Cys Val Asn Gly His Lys Phe Val Ile Thr Gly Glu
174 20 25 30
175 Gly Ile Gly Tyr Pro Phe Lys Gly Lys Gln Thr Ile Asn Leu Cys Val
176 35 40 45
177 Ile Glu Gly Gly Pro Leu Pro Phe Ser Glu Asp Ile Leu Ser Ala Gly
178 50 55 60
179 Phe Lys Tyr Gly Asp Arg Ile Phe Thr Glu Tyr Pro Gln Asp Ile Val
180 65 70 75 80
181 Asp Tyr Phe Lys Asn Ser Cys Pro Ala Gly Tyr Thr Trp Gly Ser Phe
182 85 90 95
183 Leu Phe Glu Asp Gly Ala Val Cys Ile Cys Asn Val Asp Ile Thr Val
184 100 105 110
185 Ser Val Lys Glu Asn Cys Ile Tyr His Lys Ser Ile Phe Asn Gly Met
186 115 120 125
187 Asn Phe Pro Ala Asp Gly Pro Val Met Lys Lys Met Thr Thr Asn Trp
188 130 135 140
189 Glu Ala Ser Cys Glu Lys Ile Met Pro Val Pro Lys Gln Gly Ile Leu
190 145 150 155 160
191 Lys Gly Asp Val Ser Met Tyr Leu Leu Leu Lys Asp Gly Gly Arg Tyr
192 165 170 175
193 Arg Cys Gln Phe Asp Thr Val Tyr Lys Ala Lys Ser Val Pro Ser Lys
194 180 185 190
195 Met Pro Glu Trp His Phe Ile Gln His Lys Leu Leu Arg Glu Asp Arg
196 195 200 205
197 Ser Asp Ala Lys Asn Gln Lys Trp Gln Leu Thr Glu His Ala Ile Ala
198 210 215 220
199 Phe Pro Ser Ala Leu Ala
200 225 230
203 <210> SEQ ID NO: 7
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205 <212> TYPE: DNA
206 <213> ORGANISM: Discosoma sp
208 <400> SEQUENCE: 7
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210 accgtgaacg gccacgagtt cgagatcgag ggcgagggcg agggccgccc ctacgagggc 120
211 cacaacaccg tgaagctgaa ggtgaccaag ggcggccccc tgcccttcgc ctgggacatc 180
212 ctgtcccccc agttccagta cggtccaaag gtgtacgtga agcaccgccg cgacatcccc 240
213 gactacaaga agctgtcctt ccccgagggc ttcaagtggg agcgcgtgat gaacttcgag 300
214 gacggcgggc tggtgaccgt gacccaggac tcctccctgc aggacggctg cttcatctac 360
215 aaggtgaagt tcatcggcgt gaacttcccc tccgacggcc ccgtgatgca gaagaagacc 420
216 atgggctggg aggcctccac cgagcgccgt taccgccgag acggcggtgt gaagggcgag 480
217 atccacaagg ccctgaagct gaaggacggc ggccactacc tggtaggagt caagtcctac 540
218 tacatggcca agaagcccgt gcagctgccc ggctactact acgtggactc caagctggac 600

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219 atcacctccc acaacgagga ctacaccatc gtggagcagt acgagcgcac cgagggccgc 660
220 caccacctgt tcctgtaa                                     678
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223 <211> LENGTH: 225
224 <212> TYPE: PRT
225 <213> ORGANISM: Discosoma sp.
227 <400> SEQUENCE: 8
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229 1 5 10 15
230 Arg Met Glu Gly Thr Val Asn Gly His Glu Phe Glu Ile Glu Gly Glu
231 20 25 30
232 Gly Glu Gly Arg Pro Tyr Glu Gly His Asn Thr Val Lys Leu Lys Val
233 35 40 45
234 Thr Lys Lys Gly Gly Pro Leu Pro Phe Ala Trp Asp Ile Leu Ser Pro Gln
235 50 55 60
236 Phe Gln Tyr Gly Ser Lys Val Tyr Val Lys His Pro Ala Asp Ile Pro
237 65 70 75 80
238 Asp Tyr Lys Lys Leu Ser Phe Pro Glu Gly Phe Lys Trp Glu Arg Val
239 85 90 95
240 Met Asn Phe Glu Asp Gly Gly Val Val Thr Val Thr Gln Asp Ser Ser
241 100 105 110
242 Leu Gln Asp Gly Cys Phe Ile Tyr Lys Val Lys Phe Ile Gly Val Asn
243 115 120 125
244 Phe Pro Ser Asp Gly Pro Val Met Gln Lys Lys Thr Met Gly Trp Glu
245 130 135 140
246 Ala Ser Thr Glu Arg Leu Tyr Pro Arg Asp Gly Val Leu Lys Gly Glu
247 145 150 155 160
248 Ile His Lys Ala Leu Lys Leu Lys Asp Gly Gly His Tyr Leu Val Glu
249 165 170 175
250 Phe Lys Ser Ile Tyr Met Ala Lys Lys Pro Val Gln Leu Pro Gly Tyr
251 180 185 190
252 Tyr Tyr Val Asp Ser Lys Leu Asp Ile Thr Ser His Asn Glu Asp Tyr
253 195 200 205
254 Thr Ile Val Glu Gln Tyr Glu Arg Thr Glu Gly Arg His His Leu Phe
255 210 215 220
256 Leu
257 225
260 <210> SEQ ID NO: 9
261 <211> LENGTH: 696
262 <212> TYPE: DNA
263 <213> ORGANISM: Anemonia sulcata
265 <400> SEQUENCE: 9
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267 gccactact tcaagtgtac aggaaaagga gagggcaacc catttgaggg tacgcaggaa 120
268 atgaagatag aggtcatcga aggaggtcca ttgccatttg ccttccacat tttgtcaacg 180
269 agttgtatgt acggtagtaa ggccttcac caggaattcc tgactacttc 240
270 aagcagtcct tccctgaagg ttttacttgg gaaagaacca caacctacga ggatggaggc 300
271 tttcttacag ctcatcagga cacaagccta gatggagatt gcctcgttta caaggtcaag 360
272 attcttggtg ataattttcc tgctgatggc cccgtgatgc agaacaaagc aggaagatgg 420

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VERIFICATION SUMMARY

DATE: 06/28/2002

PATENT APPLICATION: US/10/081,864

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Output Set: N:\CRF3\06282002\J081864.raw

L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date